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AMERICAN SCHOOL HEALTH ASSOCIATION

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ON

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OF THE

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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. X OCTOBER, 1940 No. 8

A STUDY OF THE HEALTH OF CHILDREN SHOWING INTERMITTENCY IN GROWTH*

C. E. TURNER, DR. P.H., SC.D.
WILFRED L. MCKENZIE, M.B.
VIRGINIA MARSTON, B.S., C.P.H.
PAULINE C. CHRISTIE, A.B., C.P.H.

Introduction—

Through the cooperation of the Malden School Department it has been possible to make a study of the causes of intermittency in growth of school children in grades three, four, five, and six. The children selected for the study were all the children in these four grades whose weight records showed a failure to gain for each of three successive months. 108 such children or 3.6% of the school population in grades three, four, five, and six were found during the study, from September through April.

Procedures—

The procedures to determine the cause of intermittency was as follows: first, we studied the weight records monthly, beginning in January, to find the children who had failed to gain for three successive months. After finding the children, the investigator held a personal interview with each. During the interview, data were collected regarding recent previous illness, family illness, habits of rest and sleep, diet, water intake, use of stimulants such as coffee and tea, habits of elimination, outdoor exercise, worry and work. Data regarding health habits were obtained for the previous twenty-four hours. The children were asked to answer the questions for the previous day only and not according to what they usually did.

In commenting on the use of a 24-hour questionnaire, the American Child Health Association says, "In view of the doubts in the minds of some as to the accuracy to be expected from school children in questioning of this kind, several eminent educators and specialists in educational measurements were consulted. It was the consensus of opinion that from 80% to 90% accuracy could be expected." The American Child Health Association statement refers to a written questionnaire covering habits for the previous twenty-four hours, given to 35,000 children of grade five and six in their survey of 86 cities** with the understanding that they were

*Contribution from the Department of Biology and Public Health, Massachusetts Institute of Technology.

**Reference—"A Health Survey of 86 Cities"—A. C. H. A., 1925, pp. 158.

not to be graded upon their answers and that they were not required to sign their names. It is our belief that the answers obtained by our study are somewhat more reliable since the personal interview allows time for the interviewer to establish rapport with the pupil and secure his confidence, as well as providing opportunity to use check questions.

Following questioning concerning health habits, the interviewer secured a picture of the home life as to the number of children in the family, whether the father and mother worked, and what their occupations were. If such questioning evoked answers suggesting disturbed home conditions, further questions were used to secure a better picture of the situation.

After interviewing each pupil, the pupil's teacher was questioned regarding nervous habits, fatigue, interest in study, worry over school work, the quality of the child's work, and any other information of the teacher having a bearing on the child's failure to grow.

The next step in the procedure was an examination of the child's health record and an interview with the school nurse to discover known physical defects and further information concerning home conditions.

Finally, 83 of the children were given a physical examination by a pediatrician. The physical examination covered mucous membranes, posture, teeth, throat, eyes, ears, nose, glands, heart, lungs and obvious nervous disorders.

Results—

Of the 108 children studied 76 or 70.5% reported recent illness. (Colds severe enough to cause an absence of three school days were included in the report as recent illness.)

The following standards of hygienic living were set up for judging deficiencies in health habits:

(1) Sleep.

Standard

Age 6 - 8 years — 11 hours.
Age 8 - 10 years — 10½ hours.*
Age 10 - 12 years — 9 hours.

(*This standard is 1 hour below the optimum amount of rest commonly suggested for each age group.)

(2) Diet.

(a) Caloric intake.

(a) Adequate for body weight by the standard of 32 calories per pound for children 6-9 years inclusive, and 27 calories per pound for older children.
(Stern "Applied Dietetics," p. 107)

(b) Protein.
(b) At least 2 glasses of milk and one other protein food or, 3 or more glasses of milk. Milk intake in other foods is credited as:

Milk drinks (egg nogs, cocoa, toddy, ovaltine, etc.)	½ glass
Milk or cereal	½ glass
Cream soup	½ glass
Ice cream	½ glass
Custards	½ glass
Milk puddings	½ glass

(c) Calcium.
(c) Any of the following combinations:
(1) 3 glasses of milk.
(2) 2 glasses of milk and a piece of cheese.
(3) 2 glasses of milk and 3 "A" calcium foods. "A" calcium foods contain approximately .04 grains calcium per serving, may be substituted for one "A" food. Milk in other foods may be credited as in (c) above.
(1 gram calcium is generally recommended for growing children, but in these data 0.8 gram is regarded as satisfactory.)

(d) Phosphorus.
(d) Any of the following combinations:
(1) 4 glasses of milk.
(2) 3 glasses of milk and a piece of cheese.
(3) 3 glasses of milk and a serving of meat.
(4) 2 glasses of milk with meat and cheese.
(These standards provide 90% of the usually specified requirements.)

(e) Iron.
(e) Diet must include either meat and 4 other fruit or vegetable iron-containing foods, or 8 iron containing foods.
(This standard provides about 80% of the usually recommended standard.)

(f) Water Intake.
(f) 4 glasses water or other clear liquid per day.

(g) Roughage.
(g) One fruit or vegetable.

(h) Vitamins.
(h) One fruit or vegetable and at least 3 glasses of milk.

(3) Outdoor Exercise.
Two hours per day.
(This standard is 1 hour below the optimum set by the A. C. H. A.)

(4) Elimination.

One bowel movement per day and a regular time for bowel movement.

The chart below shows the frequency of deficiencies and the percentage of children showing each deficiency, as judged by the standards previously described.

TABLE I.

Fundamental Health Habit Deficiencies Shown by 108 *Intermittent Children.*

Deficiency	No. of children showing deficiency	% children showing deficiency
1. Inadequate sleep	9	8.3
2. Inadequate Diet:		
(a) Insufficient calorie intake	73	67.5
(b) Inadequate protein	30	27.8
(c) Inadequate calcium	44	40.6
(d) Inadequate phosphorus	54	50.
(e) Inadequate iron	53	49.5
(f) Insufficient water intake	39	36.1
(g) Insufficient fruit and vegetables (roughage)	27	25.
(h) Low vitamin intake	70	64.9
3. Faulty elimination	21	19.5
4. Insufficient exercise	19	17.7

The most frequently occurring deficiencies were lack of adequate caloric intake, reported by 73 or 67.5% of the children, and low vitamin intake, reported by 70 or 64.9% of the children.

In addition to the above deficiencies in fundamental health habits, data covering other factors believed to be of appreciable importance were collected. They were not used in computing the summarizing table (Table III) because their relative influence on the rate of growth has not been determined. The data are presented below:

Condition	No. of Children	% of Children
No fresh air in sleeping room	14	13
No prone rest during day	90	83
Drink tea or coffee	28	25.8
Children working	9	8.3
Disturbed home condition	33	30.6
Family illness	42	38.9
Family on W.P.A. or other relief	22	20.4
Children who obviously worry	47	43.5

Eighty-three of the children were given physical examinations by a pediatrician. The others were not examined because of refusal of parents. The findings of the examinations were recorded as normal; or slight, moderate or severe defect for each item considered. The results are shown in Table II.

TABLE II.

Physical Defects of 83 Children Who Have Failed to Gain in Weight for Three Successive Months

Defect	Severity of Defect Slight	Moderate	Severe	Total	% showing defect	Total moderate & severe	% showing moderate or severe defects
Mucous membrane color	5	1	0	6	7.2	1	1.2
Posture	45	16	13	74	89.0	29	35.0
Teeth	8	14	16	38	45.7	30	36.1
Throat	9	24	17	50	60.3	41	49.4
Ears (Inflammation)	4	1	1	6	7.2	2	2.5
Nose (Obstruction)	18	1	0	19	22.9	1	1.2
Glands (Cervical)	45	4	0	49	59.0	4	4.8
Heart	0	3	0	3	3.6	3	3.6
Lungs	0	8	0	8	9.6	8	9.6
Nervous System	2	0	*2	4	4.8	2	2.5
Eyes	2	1	1	4	4.8	2	2.5

*These 2 children are convalescing from chorea.

The most common physical defects were those of throat, teeth, and posture.

The possible causes of intermittency among the 83 children who were given physical examinations were carefully analyzed. The table below shows the findings:

TABLE III.

Combinations of Possible Causes of Poor Growth Among the 83 Children Who Received a Physical Examination.

Possible Causes	No. of Children	Percentage of Children
Children without recent illness, 2 or more poor habits or serious physical defects	0	0
2 or more poor habits only	7	8.4
Recent illness only	2	2.4
Physical defects only (moderate and severe)	3	3.6
Two or more poor habits and recent illness only	13	15.7
Two or more poor habits and 1 or more physical defects only	18	21.7
Recent illness and 1 or more physical defects only	10	12.1
Recent illness, 2 or more poor habits and 1 or more physical defects	30	36.1

The weights of the 108 intermittent children were compared with the Wood-Baldwin height-weight-age tables. The percentage overweight and underweight was computed for each child. The percentages were plotted to show the distribution of these children as related to average weight. The percentages were grouped as follows: number of children between -35% and -25% underweight, between 25% and 15% underweight, between 15% and 5% underweight, between 5% underweight and 5% overweight, between 5% and 15%, 15% and 25%, 25% and 35% overweight, and number over 35% overweight.

It was recognized that seriously overweight children do not need to gain weight, and cases where dietary control was being ex-

ercised to prevent further increases in weight were not included in the above studies of possible causes of failure to gain.

It will be seen from the above figure that the weight distribution of our intermittent-growth children follows very closely a normal curve of distribution with the greatest number of children in the normal group between 5% underweight and 5% overweight. Slightly fewer children were overweight than underweight, thirty-five as compared with thirty. From this distribution it is concluded that children of about normal weight are as likely to show intermittency in growth as are either underweight or overweight children.

In our study, our concern in cases of obese children was to see that they were not using unapproved methods to reduce. Obese children under medical care were discharged from our study. Other children were followed by the research worker to improve their faulty health habits, to secure more complete recovery from illness, and to get children needing attention for physical defects under medical or dental treatment.

Summary—

1. A study was made of 108 public school children (grades 3-6) who failed to gain in weight for each of three successive months.
2. Data were collected for each child concerning his health habits, recent previous illness and home conditions. In addition, data were collected through a pediatric examination concerning the physical status, at the time of the study, of 83 of the children.
3. Sources of information included school records, nurses, teachers, doctors, and the children themselves.
4. The per cent of "poor growth" children having a history of recent previous illness was determined.
5. The data were analyzed in order to determine the per cent of "poor growth" children showing deficiency in each of eleven fundamental health habits. (Eight of these habits were nutritional.)
6. An analysis was made of the per cent of the "poor growth" children influenced by minor unfavorable factors other than health habits or physical status, not included in the above lists.
7. The data were analyzed in order to determine the per cent of "poor growth" children showing defects in each of eleven items investigated by a pediatrician.
8. A summary analysis was made in order to determine the per cent of "poor growth" children exhibiting each of eight combinations of probable causes of intermittency.
9. An analysis was made as to the distribution of "poor growth" children in terms of "average weight" for children of their height, age, and sex.

Results and Conclusions—

1. 70.5% of the "poor growth" children studied had a history of recent previous illness.
2. The per cent of "poor growth" children with fundamental health habit deficiencies ranged from 8.3% with inadequate sleep, to 67.5% with insufficient calorie intake (See Table I).
3. In addition to other factors mentioned, disturbed home conditions and family illness were found for an appreciable percentage of the "poor growth" children.
4. 89% of the "poor growth" children were found to have postural defects, 35% of them of sufficient magnitude to be termed "moderate" or "severe." 49.4% of the children exhibited moderate or severe defects of the throat, and 36.1% moderate or severe defects of the teeth. (See Table II.)
5. An analysis of the probable causes of poor growth in the children studied here showed that there was no child in the group who had not had recent illness, or faulty fundamental health habits or physical defects. 36% of the children exhibited a combination of all three of these factors. 48.5% showed a combination of two of these factors. (See Table III.)
6. An analysis of the weights of the children studied as related to "average weight" (Wood Baldwin Tables) showed that children of about "normal" weight are as likely to show intermittency in growth as are so-called underweight or overweight children
7. Failure to gain in weight for each of three successive months appears to be a useful administrative device for calling to our attention a group of children who need individual attention.

William A. Howe, M.D., organizer and past President of the American Association of School Physicians, and formerly Editor of the School Physicians Bulletin, died at Phelps, New York on his seventy-eighth birthday, September 11, 1940.

HOW THE COMMUNITY DENTIST CAN PARTICIPATE IN A SCHOOL DENTAL PROGRAM*

S. S. LIFSON

Research Assistant, School Health Study, Astoria, N. Y.

In the course of its comprehensive inquiry into school health service, the School Health Study, a privately supported undertaking sponsored by the Board of Education and the Department of Health of New York City, was impressed by the inadequacy of the existing dental program** to reach substantial numbers of the school population. Faced by a defeatist attitude on all sides as to the possibilities of enlargement of dental service in the Astoria District, where the study staff was engaged, the attempt was nevertheless made to investigate these possibilities further.

After careful study a plan was evolved along the following lines:

First, that all children should be examined to discover dental defects, and all such examinations of the mouth should be made by dentists. The examinations were to take place in the office of the private dentist with the parent of the child present. It was felt that this procedure would,

a. bring the family and the dentist together face to face.
b. give the dentist an opportunity to show the parent the extent of decay in the child's mouth.
c. give the dentist an opportunity to impress upon the parent the importance and value of early and continuous treatment.
d. give the dentist an opportunity to make whatever arrangements he desired with the parent to cover the cost of treatment.

Second, that the responsibility for guiding the dental health program should be in the hands of the classroom teachers. Dental decay in school children is a recurring problem. The school nurse and doctor are unable to give the necessary coverage that will provide for continuous detection and correction of dental defects. The school assumes the responsibility for teaching facts about dental

*Read before a joint session of the Child Hygiene Section, Oral Health Group, and the American School Health Association, at the sixty-eighth Annual Meeting of the American Public Health Association, Pittsburgh, Pa., October 18, 1939.

**The dental needs of one million elementary school children in New York City cannot be adequately met by the limited medical, nursing, and dental staff of the Health Department through its 136 dental clinics. These clinics serve only children in the first four grades who cannot afford private dental care. The primary purpose of the clinics is educational and preventive in nature. For those schools not having clinics and for older children, dental service can be obtained only through private dentists, out-patient divisions of hospitals, and welfare centers. The responsibility for getting parents to obtain dental care for these children rests chiefly with the teachers, who, each school term, urge the children in their classes to obtain dental care.

health. What is more logical than that teachers assume a major responsibility in this specialized program which is essentially educational in nature.

With these two guiding principles as the foundation for our dental health program, the next step was to set up machinery for its execution. The school administrators were first approached and the program presented to them. The school principals, superintendents, and teachers were alert to the problem, and recognized the place of the school in its solution. In New York City, the teachers have for many years carried on a dental program. The new proposals were but an extension and clarification of their previous work.

The district health officer, through the presidents of the Dental Associations in the Astoria area, called a meeting of the practicing dentists. The problem of detection and correction of dental defects in school children was presented for their consideration. The dentists realized that they had a definite stake in the school dental program and they welcomed the opportunity to cooperate with the school authorities in trying out new ways of serving more children.

Having cleared the ways, the program was launched. The School Health Study supplied special letters to the teachers which were distributed to the children. These initial dental-care letters and all subsequent follow-up letters were signed by the school principals,* as experience has shown this to be the most effective approach to parents. The letter distributed by the teachers attempted to educate the parents to the danger of neglected dental decay and stressed the importance of seeing a dentist. The letter was written in simple every-day language understandable by a majority of the parents. It was written in a personal vein presenting a few important reasons why the parent should take some action about the child's teeth. On the reverse side of this letter space was provided for the examining dentist to indicate the decayed teeth, and whether the child was under his care.

After a reasonable time had elapsed, 10 days to 2 weeks, the teachers started their follow-up program. This consisted of first asking each child for the letter that had been taken home to the parent. The teachers in their follow-up program used three forms of letters, all educational in content, which they sent to the parents. The information obtained from the child determined the selection of the proper follow-up letter. Letter A was for the child that had not as yet gone to a dentist for an examination. Letter B was for the child who had been to a dentist for an examination but had not undertaken treatment. Letter C urged the parent to see that treatment was coninued and completed as soon as possible.

*The principal is the administrative head of the school. Only over his signature should general notices be sent parents.—Ed.

The teachers kept accurate accounts of the progress and status of each child. These reports permitted an estimate of the value of the procedures instituted. The reports were a graphic demonstration to the teachers that their efforts brought substantial results.

Thus the teachers, as has been shown, had definite routines to follow in urging dental care. In addition to this they introduced new emphases in their teaching of dental health and each in her own way did much individual work with the children.

The Board of Education in selecting the schools to participate in the School Health Study chose those which gave a fair representation of schools over the city, that is in teaching personnel, types of educational programs, and economic and social status of families. Only in one respect does the district in which these schools are located differ markedly from some other areas of the city and that is that the treatment facilities and social agencies concerned in helping low income families were very limited.

The program as outlined has been in operation in the School Health Study schools for the year, September 1938 - June 1939. As was stated previously, the teachers submitted reports on the status and progress of the children in their classes. These reports submitted by the 209 cooperating teachers is the basis for the figures presented in the analysis of the results of this program.

By the end of the first year period all the children, totaling 6,436, who were enrolled from kindergarten through the eighth grade received letters addressed to their parents urging that they be taken to a private dentist for an examination.

5,664 children or 88% of the children who received the letter on dental care responded by visiting a private or clinic dentist for an examination.

The dentists reported that 4,580 children or 81% of the children examined were in need of dental treatment. Of this group 3,493 children or 76% obtained treatment.

By the end of the school year, 1,928 children or more than half of the children that were being treated, had their treatment completed.

On taking inventory at the end of the year it was found that only 12% of all the children contacted had not been examined by a dentist, and that 17% of the total group of children had not undertaken needed dental treatment.

Fifty per cent of the parents in these two groups, in response to the follow-up letters replied that financial reasons prevented their having the examination or needed dental work done.

The remaining parents, by the nature of their responses, indicated that they were indifferent to the importance of dental decay. This is the group toward which public dental education should direct its efforts.

With considerably more than half of the enrollment of 6,436 children in these seven schools reporting dental care it is of interest to observe the relative part played by the private dentists and the clinics. Private dentists examined 3,852 children or 68% of the children who responded to the letters on dental-care. The remainder or 1,812 children were examined by clinic dentists.

This figure of private dentist examinations shows the high degree to which the dentists of the community cooperated. Their cooperation is more than evidence of good will. The time given to free examinations represents actual expenditures in dollars and cents in terms of hours of service rendered, maintenance of office, and over-head expenses. This investment by private dentists is particularly interesting when it is recalled that they knew before the initiation of the program that many children whom they would examine would be unable to pay for corrective work.

Reports from the teachers show that a large proportion of the children examined by the clinics received their examinations in hospital and university part pay clinics. Having but one hospital clinic and very limited part-time Health Department clinics in Astoria, a majority of this group therefore, found their way to clinics across the river in Manhattan Borough.

Of the 3,493 children who received treatment, 2,520 children or 72% of them were treated by private dentists and 973 children or 28% by clinics.

1581 or 82% of the 1,928 children who had completed their treatment by the end of the year were the patients of private dentists, and only 347 clinic cases were completed.

Summary

The results of the program have strengthened our belief that the teacher has an important role to play in a school dental health program. Her role, however, must be clear-cut and the procedures well defined. Getting the children to go to a dentist for an examination is job enough, but to have them continue treatment until the necessary work is completed is a major accomplishment.

The fact that 5,664 or 88% of all children were examined is evidence of the support given by parents to the program. This is further substantiated by the data showing that 76% of the children who needed dental attention were placed under care. The operation of the program over a period of years should reduce to a minimum figure the number of those parents who are ignorant of the importance of either dental examinations or dental care.

Our data clearly indicates the extent to which the dentists of the community participated in this program. Such participation vastly increases dental service to school children. Dental service, like other school service, must be built on the foundation of cooperation with existing community agencies. This spells progress in public health and public service.

SOME THINGS WORTH KNOWING IN PUBLIC RELATIONS*

EDGAR BIEBER, M.D.

Health Officer and School Physician, Dunkirk, N. Y.

On Page 18 of the pamphlet issued by the Education Department** entitled "General Statement of Policy pursuant to the Regulations of the Commissioner of Education governing Health and Physical Education", We read, under Public Relations, as follows:

"Well organized statements of facts for the education of the school and community based on reports of the health and physical education program should be prepared by the school. This should bring about better cooperation and understanding of all concerned.

Such statements should include the following:

(1) The % of children in the community protected against Smallpox and Diphtheria as compared with acceptable standards.
(2) Analysis of absence due to preventable illness and accidents.
(3) Analysis of health examinations and tests, the service the school and individual parents have been able to secure and the needs for additional effort.
(4) Analysis of school health and physical education facilities essential to meet the needs.
(5) Analysis of the school physical environment conducive to health, that is, adequate heat, light, ventilation, etc.

These facts and their relation to child welfare are of immediate interest to a community and should be effectively presented through different organizations, talks, newspaper articles, bulletins, radio, etc."

We endeavor in our community to bring these facts in relation to child welfare to the attention of the public as much as possible and feel that due to the fine cooperation of our local newspapers we have succeeded fairly well in keeping the public informed regarding our various school health activities.

We try to keep them informed through the press as to our % of Diphtheria inoculations and Smallpox vaccinations, the latter having reached a high mark this year due to the outbreak of Smallpox in our county last spring.

Once a year we publish a complete article on the aims and objects of our school health program so as to keep the public informed in regard to our work.

One of our favorite approaches is through the P. T. A. organizations. I try to give a talk at each of the various P. T. A. meetings once during the year, outlining our program and requesting the cooperation of the parents. They are given a chance to ask

*Read before the New York State Association of School Physicians, Dec. 26, 1939, at Syracuse, N. Y.

**New York State Department of Education.

questions after the meetings and present their problems as we do ours.

It seems that constant repetition is necessary over a period of years before everybody will become enlightened on the subject of School Health.

The health of school children depends upon factors outside of the school, factors within the home and the community. One of the most important of these factors is the private physician of the community. His cooperation and understanding of the problems of school health play a tremendous part. Without his help and cooperation a successful program cannot be consummated. Although practically all of the annual physical examinations are done by the school physician, including the examination of the private physician's own children, they have always given us full cooperation in the follow up work.

We used to have considerable friction between the local Health Department and the school physician over communicable disease control, and as to the question of who was to do the inoculations in the schools. This has been eliminated in our city by the appointment of one man to the position of Health Officer and School Physician. This arrangement seems to have worked out very satisfactorily without an excessive waste of time and effort in the control of communicable diseases. This was proven in a recent epidemic of Scarlet Fever. Due to the fact that I hold both positions, it was possible for me to control the whole situation in Parochial as well as the Public Schools. The combined forces of the public health nurses and school nurse were available to me at all times.

Over 75% of the cases, because of their mildness, had no private physician, and were only discovered through our check of the absentees at school. Immediate dismissal from school of contacts and quarantine at the time of the first visit at the house prevented what otherwise might have been a serious situation.

We have during the past year been able to place a full time dental hygienist in our school system, part of her salary being paid by one of the charitable organizations and the other part by the Board of Education. This service has been well publicized by the charitable organizations, and has done much to create a friendly feeling among the public toward our school health service. The dentists as well as the physicians have cooperated with us 100% in this project.

The Social Service League and the Rotary Club have appointed me a member on their Boards of Directors in order to acquaint themselves more thoroughly with the needs of our people. This has enabled me to recommend cases for follow up work from our schools. Children whose parents were ineligible for state relief and still not in a position to meet the expense of necessary treatment were taken care of by these organizations.

Our school nurse should also be mentioned in speaking of Public Relations.* Her work should be primarily an educational program rather than the giving of medical service. All medical service rendered in the school should have educational value; otherwise it has no place in the school. There has been and still is much work being done by school nurses which cannot be justified from an educational standpoint. Often this is due to the lack of understanding by the principal and teachers of the nurse's real function in the school. They see her as an "angel of mercy" instead of as a teacher of health.

The school nurse in evaluating each of her activities may ask herself such questions as these; What is the educational value of this activity? Will it tend to develop habits of independence? Will it strengthen home responsibility? Will it encourage a frank and constructive facing of problems? If she asks herself these questions, she will find that some activities have educational value; whereas others may be merely the path of least resistance. In order to be of educational value, an activity must be capable of arousing interest in a problem and promoting understanding of it. And, the activity must tend to change behavior to a desirable end.

Health education has two parts; the practicing of health habits, and the acquiring of factual knowledge about health and health practices.

In the primary grades the emphasis is placed on the development of good health habits through doing. There should be opportunity for class discussion on health topics of interest to the child, but the acquiring of knowledge by the child is not the teacher's primary aim. The health habits emphasized are those which the child can carry out himself—not those requiring the help of an older person to carry out.

How can the school nurse help in this program? Her value will depend upon her vision in regard to the value of sound health teaching and her personal ability to work with the teachers, parents, and children. In the kindergarten the nurse becomes acquainted with the children. She visits the classroom and talks with them. She aids the teacher by finding new and interesting health material. She may help to meet the needs of individual children in various ways, such as securing milk for those who are indigent. Sometimes she conducts a class in child care for the mothers of kindergarten children, and thus gives valuable help to the teacher in her health program.

The nurse's opportunity does not stop in the kindergarten. If she knows the health-teaching program of each teacher, her conferences with individual pupils can be made more interesting and valuable. By tying up her remarks with the teacher's health pro-

*For greater detail see Public Health Nursing.

gram, the nurse increases the child's interest in the subject by giving it a personal meaning. A knowledge of the teacher's program is also of value to the nurse in her consultations with the parents. She interprets the teacher's aims, and thus helps to gain the co-operation of the parents in the project.

Through her contact with the parents and the community, the nurse is able to give the teachers information about the health conditions of the children's homes, the neighborhood they play in, and the community in general. This information will enable the teacher to fit her health teaching to the child's environment.

The nurse should be on the watch for all new, scientifically sound health material. By supplying the teachers with interesting material about the value of sound health teaching, she can help to arouse an interest in the subject among those who do not enjoy teaching health. The nurse is in a position to learn of errors which may be made by the teachers in interpreting health-education material to their classes. She may tactfully see that these errors are recognized, and give the teacher the correct interpretation. The alert nurse observes any insanitary conditions in the school building. She is sensitive to signs of emotional and physical strain in the teachers and children. Often by her example she can encourage the teachers to build up their own health and improve their health habits.

Perhaps the nurse's greatest contribution is her interpretation to the home and community of the work and aims of the school, and her interpretation to the school of the needs and resources of the home.

In answer to question 13 of the Questionnaire sent out by the American Academy of Pediatrics,* "What are the chief benefits of the school medical service as it operates in your community"? 91% of the replies mentioned one or more benefits from the service in their community. Nearly as many listed educational benefits to parents, children, and teachers in such forms as the following:—

Makes the public physical examination conscious.
Points out the need of regular child health supervision.
Makes parents more health conscious.
Educating the laity and through them the indifferent doctor.
Points out neglect to parents.
Enforces attention to many cases medically important.
It tends to overcome the lethargy of parents and welfare agencies in having defects corrected.
Value of prevention rather than cure.
Increase in cooperation between patient and doctor due to increase in intelligence.

*June, 1937, Committee on School Health and Health Education.

In the report of the committee on School Health and School Health Education* two of the five principals proposed to guide in the development of Medical service for the public school are of particular interest in a paper on Public Relations.

1. "The School Medical service should be thoroughly coordinated with the other community medical facilities.
   (a) The service should be conducted in a manner that will encourage the cooperation of all proper community facilities.
   (b) The service should not conflict nor compete with the private practitioner or other medical facilities, either through treatment, through diagnosis, or through giving examinations or advice that interferes with or is a substitute for other community medical facilities.
2. The advice which is given to parents, pupils or school staff should meet the best medical standards. In order to carry out this principle the examinations and medical inquiry must meet the following requirements.
   (a) The responsibility for the character of medical service must be borne by the medical profession.
   (b) There should be accurate detection of defect cases.
   (c) The recommendations for medical care must be backed by authority, be practical, and carry a reasonable likelihood of need. Education for periodic health examinations should not be confused with a specific recommendation for medical care.
   (d) The examination service should be limited both in the number of pupils and in the examination procedure in order to maintain the best medical standards. It should be limited as far as necessary for effective service with given resources (No demand for covering large numbers of children, nor for covering particular examination techniques should interfere with the judgment of the physician in giving advice to parents, pupils or school staff.)"

In concluding a paper on a subject of this kind, it may be well to repeat that the school health program is one of the many activities directed toward the preservation and improvement of child health, and that it should be closely coordinated with all other Community health activities.

From report of Committee on School Health Policies, Hartford, Conn., February, 1939**—

"A school health program should:—

1. Provide a healthful environment. This includes attention to the arrangement of the school program and the social and emo-

*American Academy of Pediatrics, June, 1937.
**Published by State Supt. of Education of Conn., Bureau of Supervision, Feb., 1939.

tional tone of the class room as well as attention to school sanitation.

2. Have a planned program for the care of accidents occurring at school and for cases of sudden sickness.

3. Have a planned program for assisting in the Health Department program of contagious disease control.

4. Teach pupils habits and attitudes conducive to the maintenance of good health, and facilitate the accumulation of knowledge relating to the causes of disease, the way certain diseases are spread and the known methods of preventing disease from the point of view of both individual and community health.

5. Encourage periodic health examinations of pupils, develop a plan whereby such examinations will be obtained, and keep a record of the findings and recommendations.

6. Give special attention to those in need of medical or dental care through a follow up program, which, will, when necessary, guide parents and pupils to sources of medical and dental treatment.

7. Provide special education programs adapted to the needs of handicapped pupils.

8. Provide supervision and in-service training for teachers, and place specific responsibility in the hands of some person especially qualified in education and in school health work for coordinating all school health activities and for relating these to community health programs."

* * * * *

New Student Health Service Building,—Funds have been appropriated by the regents to construct a $300,000 student health service building for the Los Angeles campus of the University of California. The plans provide a complete health service for the Los Angeles students exclusive of hospitalization. The regents increased the incidental fee on the Los Angeles campus from $23 to $25 for the added service. At present, the limited health service available to a student body of about 8,500 is crowded into cramped quarters and operated by part time employees. On the basis of experience on the Berkeley campus, it is estimated that the health service would require a floor area of about 23,500 square feet. The Journal of the American Medical Association, July 27, 1940, p. 309.

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Longevity,—Whereas the expectation of life at birth of the general population in our country in 1901 was only 49.24 years, the figure had increased to 62.78 years by 1938, this being the latest year for which the requisite data for the computation of a life table are available. The gain of 13.54 years achieved during this period amounts to 27½ per cent. of the original figure. Statistical Bulletin, Metropolitan Life Insurance Company, May, 1940; p. 2.

PROGRAM

AMERICAN SCHOOL HEALTH ASSOCIATION

October 7 to 11, 1940, Detroit, Michigan

In association with the Annual Meeting of the American Public Health Association

MONDAY, OCTOBER 7, 8:00 P.M.

GENERAL SESSION: Esquire Room, Hotel Book-Cadillac

Presiding—CHARLES L. OUTLAND, M.D., President

"School Health Procedures, Practical and Theoretical A Study of Experience In Tennessee." W. CARTER WILLIAMS, M.D., and W. FRANK WALKER, DR.P.H.

Experience In Detroit." JOSEPH G. MOLNER, M.D., and VAUGHN S. BLANCHARD.

"Discussion." DON W. GUDAKUNST, M.D.

General Discussion

TUESDAY, OCTOBER 8, 2:30 P.M.

SPECIAL SESSION: Grand Ball Room, Hotel Statler

PUBLIC HEARING ON THE SCHOOL HEALTH BUDGET OF ANYTOWN

(Under the auspices of the American School Health Association, the Oral Health Group, and the Program Committee, American Public Health Association)

Dramatis Personae:

The Mayor of Anytown—
REGINALD M. ATWATER, M.D.

The City Council—
ARTHUR T. MCCORMACK, M.D.
J. HOPE ALEXANDER, M.D.
EDWIN HENRY SCHORER, M.D.
JAMES WALLACE, M.D.
C. A. HARPER, M.D.
JAMES A. HAGUE, M.D.

The Health Officer—
HAROLD D. CHOPE, M.D.

The Superintendent of Schools—
N. P. NEILSON, PH.D.

The State Director of School Health—
DON W. GUDAKUNST, M.D.

The Director of Nursing—
BOSSE B. RANDLE

The Director of Dental Hygiene—
EMORY MORRIS, D.D.S.

The State Psychiatric Social Worker—
MAUD E. WATSON, PH.D.

The Executive Secretary of the County Medical Society—
RAYMOND H. GREENMAN

A Representative of the Parent-Teachers' Association—
DOROTHY B. NYSWANDER, PH.D.
The Representative of the Taxpayers' League—
GEORGE T. PALMER, DR.P.H.
A Spokesman for the Parochial Schools—
To be announced.

WEDNESDAY, OCTOBER 9, 9:30 A.M.

JOINT SESSION: Panel Discussion—
Crystal Ball Room, Hotel Book-Cadillac
Health Officers and Public Health Education Sections of the American Public Health Association, and the American School Health Association.
Presiding—ADOLPH WEINZIRL, M.D., CHARLES L. OUTLAND, M.D., and CARL A. WILZBACH, M.D.
ARE WE EMPHASIZING SERVICE IN PUBLIC HEALTH AT THE EXPENSE OF EDUCATION IN HEALTH?
Panel Discussion Leader—WILLIAM P. SHEPARD, M.D.
LEONA BAUMGARTNER, M.D.
W. W. BAUER, M.D.
GEORGE B. DARLING, DR.P.H.
JOSEPH W. MOUNTIN, M.D.
ALBERT C. MCCREARY, M.D.
JOHN T. PHAIR, M.B.
CLAIR E. TURNER, DR.P.H.
DON W. GUDAKUNST, M.D.
DOROTHY B. NYSWANDER, PH.D.

WEDNESDAY, OCTOBER 9, 2:30 P.M.

JOINT SESSION: Banquet Room, Hotel Statler. Public Health Nursing Section, and Oral Health Group of the American Public Health Association, and the American School Health Association.
Presiding—RICHARD C. LEONARD, D.D.S.
MARSHALLING COMMUNITY FORCES FOR DENTAL HEALTH
Speakers: MILDRED TUTTLE, R.N., M.A.
ANNIE J. TAYLOR
JOSEPH I. LINDE, M.D.
FRANK HOUGHTON, D.D.S. (Stereopticon)
"*Discussion.*" FRANK C. CADY, D.D.S., and HAROLD H. MITCHELL, M.D.

THURSDAY, OCTOBER 10, 2:30 P.M.

JOINT SESSION: Crystal Ball Room, Hotel Book-Cadillac. American School Health Association and Michigan School Health Association.
Presiding—CHARLES L. OUTLAND, M.D., President.
EVALUATION OF SCHOOL HEALTH PRACTICES

Panel Discussion Leader: CHARLES H. KEENE, M.D.

C. D. BARRETT, M.D., M.P.H.
BURTON R. CORBUS, M.D.
MARJORIE DELAVAN
KENNETH L. HEATON, PH.D.
G. ROBERT KOOPMAN, A.M.
L. H. LAMB
HAROLD H. MITCHELL, M.D.
JAMES A. OLSON, M.D.
MABEL E. RUGEN, PH.D.
C. E. TURNER, DR.P.H.
MAUD E. WATSON, PH.D.

FRIDAY, OCTOBER 11, 8:00 A.M.

BREAKFAST SESSION: American School Health Association, Parlor F, Hotel Statler.

FRIDAY, OCTOBER 11, 10:30 A.M.

JOINT SESSION: Bagley Room, Hotel Statler. American School Health Association and Public Health Education Section.

Presiding—CHARLES L. OUTLAND, M.D., and CARL A. WILZBACH, M.D.

"School Health Promotion Through
Environment." EDNA GERKEN, C.P.H.
Instruction." MABEL E. RUGEN, PH.D.
Services." HELEN A. CAREY, M.D., ELLA E. MCNEIL, R.N., and J. N. WISAN, D.D.S.

"The Physician As An Advisor." ARTHUR R. TURNER, M.D.

"The Coördination of Health and Education Agencies." WALTER WILKINS, M.D.

Discussion

FRIDAY, OCTOBER 11, 2:30 P.M.

JOINT SESSION: English Room, Hotel Book-Cadillac. Food and Nutrition Section, and Oral Health Group, and The American School Health Association.

Presiding—FREDERICK W. FABIAN, PH.D., and CHARLES L. OUTLAND, M.D.

NUTRITION AND ITS RELATION TO DENTAL HEALTH

"What Can the Dental Health Workers Teach in Regard to Nutrition?" WILLIAM R. DAVIS, D.D.S.

"A Preschool Dental Service Program with Coördinated Nutritional Study." RICHARD C. LEONARD, D.D.S.

"Nutrition Education in a Dental Program." RUTH L. WHITE.

"Nutrition and Dental Health Education at Different Grade Levels in the Elementary Schools." HARRIET STONE.

"Creating a Dental Consciousness Within a Community." BERTHA HOLMAN.

Discussion: F. O. PEARSON, M.D.

EDITORIALS

On another page of this issue of The Journal is a brief notice of the death of **William A. Howe, M.D.** Because of the vision, energy, and hard work of Dr. Howe, the American Association of School Physicians was organized at Buffalo, N. Y. in 1926. This School Physicians Association, by changes in Constitution and By-Laws, became the American School Health Association in November, 1937.

William A. Howe was born in Phelps, New York, September 11, 1862. He received from Hobart College the B.S. degree in 1885, and the honorary L.L.D. from Hobart in 1926. He graduated from Medical School at the College of Physicians and Surgeons (Columbia University) receiving the degree of Doctor of Medicine in 1888. He engaged in the general practice of medicine at Phelps from 1888-1909, was coroner of Ontario County for six years, health officer of Phelps for ten years. For twenty years he was a member of the board of the Phelps High School.

Dr. Howe had been President of the United States Board of Pension Examining Surgeons, was Deputy Commissioner of Health in New York State 1910-1914, and State Medical Inspector of Schools for the Department of Education, New York, 1915-1934. Dr. Howe had held numerous offices in national organizations connected with the field of work in which he was engaged. He was a past president of the Division of Child Hygiene of the N.E.A., of the American Association of School Physicians, and for six years was Secretary and Treasurer of that organization. He was a member of the American Public Health Association, and of the State Medical Society, and in 1929 was awarded the Ling Foundation Medal.

Those of us who are or have been professionally engaged in various phases of the school health program, and have been active in the affairs of the American School Health Association, especially during the days when it was known as the American Association of School Physicians, feel that we have lost a real friend.

Workers in the field of school health owe to Dr. William A. Howe a distinct debt because of his efforts and successes in the organization of school health activities, and in bringing about a closer correlation among the personnel workers in this field of public health. C. H. K.

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"Are we emphasizing service in public health at the expense of education in health?"

"When is education in health sacrificed for the sake of giving public health service?"

"What kind of public health service interferes with necessary education in health?"

These are questions which our Program Committee promises us will be answered in a lively panel discussion at a Joint Session of the American School Health Association, the Health Officer's Section and the Public Health Education Section of the American Public Health Association in Detroit.

As all school health workers regard school medical and nursing services as fundamentally educational, it is appropriate that we should have a very critical review of this question. We recognize that annual routine examinations and the examination of athletes as a protective measure may be carried out without regard for education. To obtain medical and dental service for children and at the same time educate them to want and appreciate this service is a problem requiring our clearest thinking.

The following provocative statement came from two of our members and will be considered by this panel in Detroit:

"The White House Conference stated that it is unsound to do things for people which they can do for themselves. The belief is that this weakens the people, whereas learning the reasons for things and doing them themselves, strengthens the people. Educators believe that we only learn through doing, and this means that our public health programs and our health education programs should lead and stimulate people to action rather than allowing them to be carried through life by a safeguarding agency. . . . There are many reasons for the tendency to give service instead of education in public health. . . . It is much more satisfying to the ego of the individual to step in and render a professional service in the medical care of the individual or in the sanitation of the home than to educate the individual to do the same thing himself.

"It is easy to render a professional service, but it is difficult and slow to educate. Public Health administrators glibly give lip service to the principle of education, but do they really believe in it? We have been tacitly educating people away from carrying their own responsibility for maintaining and improving their health and securing the necessary profesional service in a great many lines. I refer here, obviously, to people who are not really indigent and therefore necessarily the responsibility of government. The question is not at all academic. For example, we often measure the efficiency of school health work by the number of physical defects corrected. In order to secure a good record in this respect, we accept corrections of low standard, we drag the child into his correction without any education, and we needlessly inter-

fere with the responsibility of parents. There is a clear conflict between the service idea and the education idea. We have had privy building campaigns which gave interesting data in the number of new privies built and built hundreds which were little used or not used at all. We talk about medical participation and the educational possibilities of the physician, nurse, and dentist in private practice, but in only one or two places in the country has anything real been done in this direction."

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ABSTRACTS

The School Luncheon,*—The following situation suggests one met in many schools. Do you have the same problem? Can you plan to correct it during the next school year? The problem itself —The superintendent, principal, and lunchroom manager realize that the children are not purchasing wise lunches. Not enough hot dishes and healthful desserts are sold. Candy, cookie, and ice cream sales are mounting.

What to do about the problem—One reason for failure to sell an adequate quantity of truly healthful foods is the amount of competition to those sales offered by sale of processed foods. Is it then possible and practicable to remove some of this competition from the selling field? Is it possible so to increase salability of healthful foods as to increase their sales appreciably? Are there any merchandising tricks which might be employed to advantage in this situation?

The plan of action—The manager, possibly with the help of frank criticism from the teachers, evaluates the sales appeal of her lunch counter. Perhaps a re-arrangement of the foods on the counter is needed. A tempting array of hearty foods—the hot dish, soup, salad—coming first on the counter helps to tempt the appetites of the hungry children. Then let the puddings and desserts come next; and last, the more concentrated sweets—ice cream and cookies—if they are offered for sale. It is a good plan to allow no sale of ice cream or candy until everyone has had the opportunity of purchasing other foods. The counter may then be opened for the sale of these during the last five minutes of the lunch period.

The sale of the hot foods and salads may, in some schools, be increased by providing adequate lunchroom seating facilities for the students. It is not easy to eat a "stand-up" lunch, and the lack of a comfortable place to lunch discourages purchases.

Is the manager merchandising her food efficiently? Is enough attention being paid to interesting use of color? Slices of fresh

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*Discussed by Frederica L. Beinert, B.S., Nutritionist, Massachusetts Department of Health. Contact, Massachusetts Department of Public Health and School Health Administrators and Medical Officers, June, 1940, p. 7.

strawberry or cubes of jello in various colors, grated carrot—or beet, shredded raw spinach—these are good notes of color interest, and a relief from the usual cherry or dash of paprika. Careful arrangement of the plate lunch so as to give the utmost "eye-appeal" increases sales.

One successful manager suggests that the lunchroom must compete with neighborhood restaurants and with magazine advertisements. Find out from the students their favorite restaurant menus and try to duplicate some of the dishes. When a particularly attractive plate, one that can be copied for service on the school lunchroom counter, appears in one of the magazines, that too can be duplicated, and the magazine illustration furnishes excellent poster material.

The same manager suggests that dishes used in the lunchroom should be chosen not alone because of durability, but also for attractive service. Glass plates increase salad sales. A variety of dessert dishes of various heights make an interesting counter arrangement, and seems to help sell more puddings.

The plan of action for attacking the problem must of course include a time schedule for the teacher manager which will enable her to manage her lunchroom efficiently. Good management is a time-consuming matter, and the teacher with a full classroom program cannot be expected also to devote an adequate amount of time to her lunchroom responsibilities. The school lunchroom provides an excellent teaching situation leading to good health habits, wise food choice, and the building of good citizens.

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Rural-School Water Supply and Sewage Disposal,—School trustees and the teaching staff are primarily responsible for the sanitary conditions in and around rural schools. It is recognized that every effort should be made to encourage trustees in securing adequate advice because they usually do not solicit such advice. Local well-drillers and carpenters are often employed to develop sources of water supply or to provide toilet facilities without any knowledge as to the problems involved.

Speaking on this subject before the District Superintendents of Schools of New York State, at their meeting held in New York City on October 12th, Mr. C. R. Cox, chief of the Bureau of Water Supply, said:

"Many of the local school physicians who are primarily concerned with sanitation and public health in the schools under their jurisdiction are also the local health officer of the township or municipality in which the schools are located. This is fortunate for the reason that close relationships exist between the health officers and the district state health officers of the department. It is recognized that school trustees or teachers acting through the local physicians and health officers can secure directly the as-

sistance and co-operation of the district health officers without direct appeal to the state health department.

In addition to this assistance, the Division of Buildings and Grounds of the State Education Department has developed a co-operative program with the central office of the State Health Department, through which plans for proposed water-supply and sewage-disposal systems may be approved by the State Department of Health before the plans are presented to the Division of Buildings and Grounds. This is in harmony with the requirements of the public health law. Architects and sanitary engineers have been encouraged to present suitable plans and specifications for approval. In general it is urged that only these plans be submitted to the State Health Department for approval which have to do with water-supply and sewage-disposal projects for schools." American School Board Journal, March, 1940, p. 103.

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Schick Tests and Revaccination,—To the Editor:—In doing school work I encounter considerable disagreement among the profession as to how often Schick tests should be given children who have previously had a negative test. Will you kindly inform me what the best opinion is? Another question on which there is disagreement is how often children should be revaccinated. M.D., Indiana.

Answer,—If the Schick test is negative in an individual who has not been immunized artificially against diphtheria by the customary means, it should not be necessary to repeat the test on future occasions. However, when a negative Schick test has been secured as the result of immunizing inoculations, future Schick tests should be performed for the purpose of determining the duration of the immunity that was artificially established. The length of time artificially induced immunity endures depends on the antigenic material and the dosage used. Under some circumstances it would be well to perform a Schick test once a year whereas, if the best procedures for active immunization are followed, the average immunity should last from three to five years or even longer. Then Schick tests could be repeated after such intervals of time have elapsed.

If a child was successfully vaccinated during the first year of life and revaccinated successfully when entering school, immunity, in most instances, would probably endure for life. Some health departments recommend that revaccination be performed every five years. Regardless of any past vaccinal history, every individual should be vaccinated immediately after any known exposure to smallpox. An individual with a typical vaccination scar seldom contracts smallpox. The Journal of the American Medical Association, August 10, 1940, p. 479.

Evaluating the Entire Program,—The time is here when our schools need to review their function and responsibility pertaining to child health. Entire school programs need to be evaluated critically to determine what health values they are creating or are failing to create.

The first danger that we see where health education has pursued a traditional program is that "health" as a school function is not adequately integrated or properly related throughout the school program.

In the second place, it is still too often true that departments of health* education are compelled through local pressure to win games at too great a price.

Health education departments now must promote a more comprehensive program. How good is your health program?

1. Is the school meeting its responsibility for accident prevention and safety for children from the time they leave their homes until they return?

2. Is the school providing a thoroughly healthful environment?

3. Is the school meeting its full responsibility for guiding children in normal, healthy growth and is it helping them acquire all desirable health habits?

4. Is the school meeting its responsibility in training in desirable attitudes: honor, fairness, regard for pupils' own rights and rights of others; in wholesome mental hygiene and in all personal attributes of character?

5. Is the school making adequate provision for individual pupil health needs through regular and frequent examinations to detect nature and extent of physical handicaps?

6. Does the school maintain an adequate instructional program from every standpoint of providing necessary therapeutic exercises for correcting individual pupil handicaps; also from the standpoint of adjusting instructional materials and procedures in relation to those pupil needs?

7. Is the school exercising extreme care in staying well within the "physiological limits" of children and is it strictly avoiding the creation of functional and organic physical handicaps?

8. Does the entire school and does every teacher know the symptoms of the common communicable diseases and does the school have an organized procedure to prevent the spread of epidemics?

9. Are the content and the procedure of the instructional program, particularly in the early grades, adapted to the children's interests and capacities? John J. Lee, The Nation's Schools, February, 1940. Abstracted by R. J. Jirinec, M.D.

*physical

Infection from Books,—Transmission of infection by books has been investigated to a considerable extent in the case of acute contagious disease, but the special problems which arise in tuberculosis have received comparatively little attention. In the British journal *Public Health* (1940, LIII, 157), a committee of investigators have presented the most significant existing evidence with respect to the danger of acquiring tuberculosis from books together with a general opinion on its implications. They conclude:

"(a) The probability of living tubercle bacilli being deposited on books read by consumptive patients is high.

(b) While experimental evidence shows that bacilli may remain alive in dried sputum, the proportion which does so is small.

(c) The experiments of Kenwood and Dove indicate that at most a minute proportion of bacilli in sputum remain alive after one month in the dry state.

(d) Assuming that a reissued book contains living tubercle bacilli, the chance of their causing reinfection in an adult is very small.

(e) When recently contaminated books come into the hands of uninfected children there is probably a real risk. In the case of uninfected adults the risk is difficult to assess.

(f) Dry heat appears to be the only form of active sterilization applicable to books at economic cost; but even this can not be considered as harmless. And it is doubtful whether measures of this kind would be widely adopted.

(g) It may be recommended:—

(1) That cheap books, much soiled, should be destroyed.

(2) That other books known to have been exposed should set aside for a period of a month or more before reissue.

The Committee is reluctant to belittle the risk of infection from books, but it seems, on the whole, to be small. It is certainly not one of the major risks and the need for active measures is not comparable with the need, for instance, for more successful case-finding, or for increased facilities for segregation of infective patients." Health News, New York State Department of Health, July 15, 1940, p. 121.

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The Oslo Meal,—Surprising and even astonishing results from experiments in nutrition appear to be endless. One of the more recent is reported by Dr. Carl Schiotz of Oslo. It relates to a special "breakfast" which has come to be known as the Oslo Meal. According to the report, the school boys who ate this meal daily during the experimental period gained 48 per cent more in weight than did school boys on the standard hot luncheon while the school girls gained 140 per cent more weight.

The Oslo Meal consists of about one-third quart of whole milk,

and unlimited amount of Kneippcracker with margarine and goats' milk cheese, half an orange, half an apple and a raw carrot. The entire meal is served cold.

The Oslo experiment was corroborated in London where the same items were served except that whole-wheat bread was substituted for the Kneippcracker and Caerphilly for goats' milk cheese.

Why such a diet yields the extraordinary gains in weight is not well known. Whether this can be accounted for by the vitamin content of the particular items of food or by some other factor is open to debate.

One or another of the items in the Oslo Meal is rich in each of the known vitamins. Together the several items contain liberal amounts of all the known nutritional requirements of the body, carbohydrates, proteins, fats, vitamins and minerals. The aggregate of one serving each of the items yields about 650 calories. This, as well as the amounts of several of the nutritional substances, would vary considerably in the case of any individual on the Oslo Meal because the appetite alone governs the amount of Kneippcracker, margarine and cheese allowed.

This experiment appears to cast doubt on the importance attached to hot lunches. While a hot lunch may be more palatable, the Oslo experiment suggests that it is quite secondary to the kinds of food in the diet, so far as nutrition is concerned. Of course quantity is a factor also.

An outstanding feature of the Oslo Meal is its simplicity and its economical character. The absence of sweets is also a noticeable feature. Illinois Health Messenger, August 1, 1940, p. 88.

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Plant Plays Its Part,—Boards of Education and school officials have the obligation and responsibility of safely housing the boys and girls in their schools. Children, as well as their parents have the right to expect that adequate safeguards are taken to assure that physical well-being is not jeopardized during the educational process. Many things about the school building and grounds have a direct bearing on the health and safety of the occupants.

Without exception the most important item in connection with the school plant is its water supply. When it is determined that the water is satisfactory as to quality, it is the concern of school officials that water be available in sufficient quantity to afford full safeguards for health and fire protection.

The plumbing or sanitary system in the building constitutes another factor important from the health point of view. There must be an adequate number of facilities of the various types with installation made in accordance with the sanitary code having jurisdiction. The location of toilet rooms within a school is made so as to minimize vertical travel and to avoid congestion in corridors and stairhalls. There should be at least one toilet room for each sex on each floor.

Sanitary drinking fountains should be available on each floor, located in corridor niches near the toilet rooms. Handwashing facilities should be provided inside the toilet rooms of high schools and either inside the toilet rooms of elementary schools or in a corridor niche at the entrance of each toilet room. It is desirable to have mirrors to encourage children in habits of tidiness.

Hand washing facilities at or near the entrance to the cafeteria are desirable.

Heating and ventilating of the buildings are important factors. A continuous fresh air supply to all rooms should be maintained as should a temperature range between 68° and 70° F. In those regions where low winter temperatures prevail, the moisture content of the air gets so low as to make desirable the introduction of additional moisture.

Then there is the item of natural and artificial lighting. Our schools should provide the best lighting possible on the basis of information now available. Children should be furnished the amount of light that will enable them to carry on their work with the least strain upon their eyes consistent with the long-range effect upon their nervous systems.

Pupil seating is one of the most significant items in connection with the school plant. The seat should be fitted to the pupil. Modern seating provides for these adjustments and it remains only for school authorities to see that they are made at the beginning of each term.* There is a marked tendency toward the use of movable seats in elementary schools.

In matters of health we should give recognition to a branch of the system whose services usually go unheralded. The care of the school plant by an understanding janitorial force is a factor of considerable importance. Unfortunately, as a general rule, these tasks are performed in the light of diminished appropriations. Appropriations must not be reduced to a point at which the health of the pupils becomes endangered. Francis R. Scherer, The Nation's Schools, February, 1940. Abstracted by R. J. Jirinec, M.D.

*Departmentalization, with pupils moving from room to room, makes the adjustable seat almost worthless.—Ed.

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Wichita Falls, Tex.,—The school board has adopted a rule requiring vaccination for smallpox. Several students, lacking vaccination, have been barred from school attendance.

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Tulsa, Okla.,—The school board has approved the establishment of free hot-lunch programs for indigent pupils. The programs are being operated with the aid of the WPA, Federal Surplus Commodities Corporation, and welfare agencies.

REVIEWS

A College Textbook of Hygiene. *Dean Franklin Smiley, A.B., M.D., and Adrian Gordon Gould, Ph.B., M.D.* The Macmillan Company, New York, 1940, pp. 539. Price $2.50.

This is the third edition of a text, the first edition of which appeared in 1928. Changes and improvements in our knowledge of hygiene have brought about this reorganization, and improvement of material. While it is divided into sections each devoted largely to a special "system" of the body, such as respiration, digestion, nervous system, etc., the emphasis is placed, as it should be, on function and care rather than on structure.

There has been added new helpful material on air conditioning, which has had such a boom in public interest recently, and there is a new chapter on the best use of the medical services in the community. This is an excellent text for class use at the college level. Charles H. Keene, M.D.

Handbook of Hearing Aids. *A. F. Niemoeller, A.B., M.A., B.S.* Harvest House, New York, 1940, pp. 156. Price $3.00.

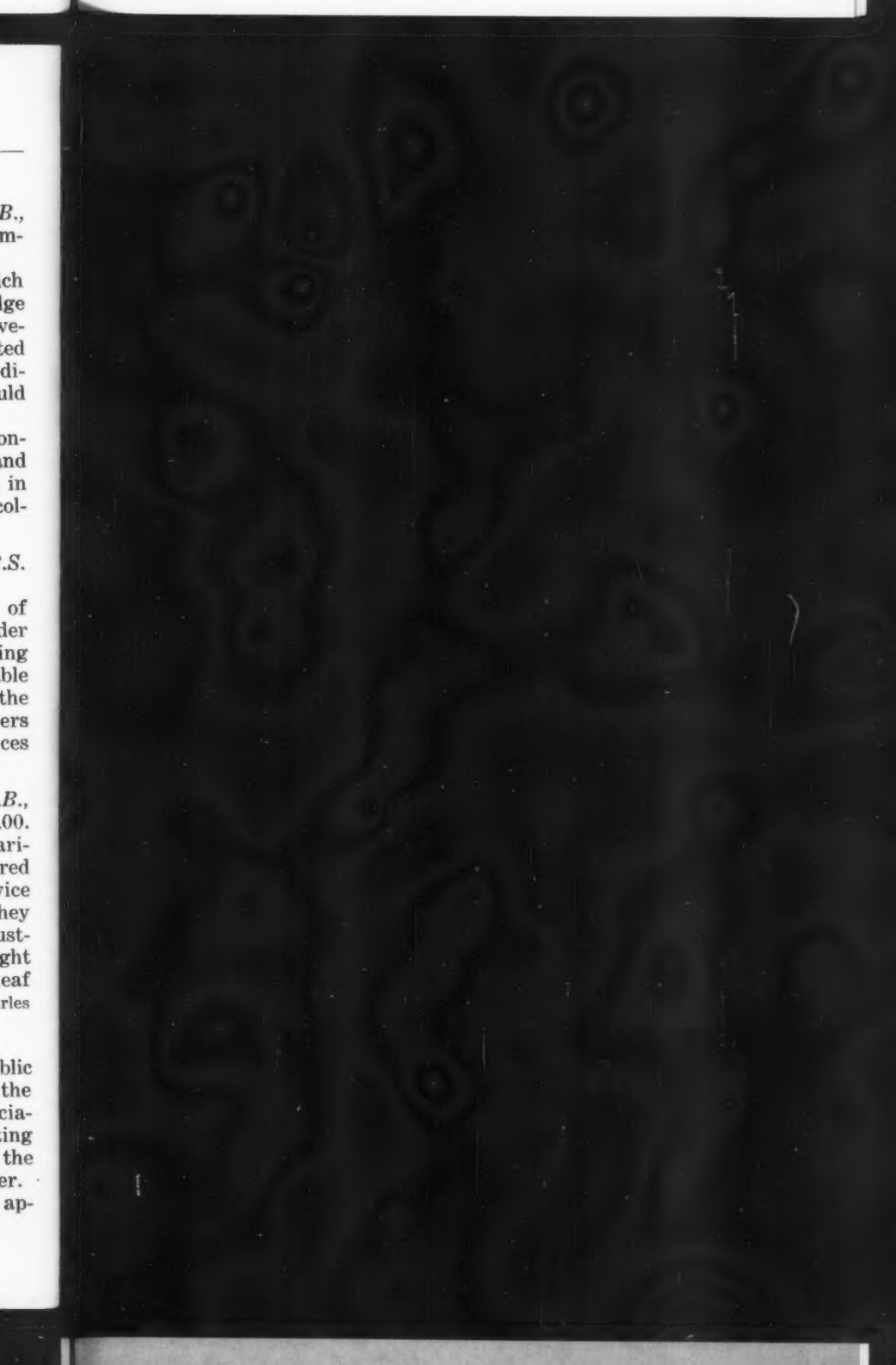
As the title indicates, this text is devoted to the discussion of mechanical aids for the hard of hearing. They are discussed under the various types such as collection instruments, electric hearing aids, bone conducting aids, etc. This is a practical and valuable text for the hard of hearing, or for those who need to advise the hard of hearing in the selection of hearing aids. The later chapters discuss the various types of models for hearing aids, and the prices of the various types. Charles H. Keene, M.D.

Complete Guide for the Deafened. *A. F. Niemoeller, A.B., M.A., B.S.* Harvest House, New York, 1940, pp. 256. Price $3.00.

This test discusses statistics on the hard of hearing, the various parts of the hearing apparatus, the different kinds of impaired hearing, the causes, the various sorts of hearing tests, some advice to the deaf as how to get the most from the residual hearing they have, and various factors of education, and other personal adjustments. This is an informative and worth while text, which might well be read by those who are in intimate contact with the deaf either in home or school, and also by the deaf themselves. Charles H. Keene, M.D.

MEETING

The American School Health Association, the American Public Health Association, the Michigan Public Health Association, the International Society of Medical Health Officers, and the Association of Women in Public Health will hold their next annual meeting at Detroit, Michigan, October 7-11, 1940. The headquarters of the American School Health Association will be at the Hotel Statler.

The program of the American School Health Association appears on page 244.

Hotel reservations should be made immediately.